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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,690	03/08/2002	Yoshiyuki Hiraga	0020-496P	9308

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EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

LD

Office Action Summary

Application No.

10/070,690

Applicant(s)

HIRAGA ET AL.

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 5-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The rejection of claim 15 under 35 U.S.C. 102(b) as being anticipated by Schreyer 3,085,083 is moot in view of applicant's amendment.

The rejection of claim 16 under 35 U.S.C. 103(a) as being unpatentable over Schreyer, 3,085,083 in view of Kaulbach et al, 6,541,588 B1 is moot in view of applicant's amendment.

The rejection of claims 1, 3, and 5-16 under 35 U.S.C. 103(a) as being unpatentable over European Patent Publication EP 0870,792 A1, Bidstrup in view of Kaulbach et al, 6,541,588 B1 is moot in view of applicants amendments.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, 11, and 13, are rejected under 35 U.S.C. 102(b) as being anticipated by Schreyer 3,085,083, for reasons of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schreyer, 3,085,083 as applied above to claims 1, 8, 11, and 13, in view of Buckmaster et al, 5,726,214 (Buckmaster) and Hartwimmer et al, 4,262,101 (Hartwimmer), for reasons of record.

Claims 3, 5-7, 10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schreyer, 3,085,083 as applied above to claims 1, 8, 11, and 13, in view of Kaulbach et al, 6,541,588 B1 (Kaulbach), for reasons of record.

Response to Arguments

Applicant's arguments filed November 19, 2004 have been fully considered but they are not persuasive.

Applicant argues that the cited Schreyer reference fails to disclose all features as instantly claimed, including the use of hydroxide and/or carbonate salts in its disclosure and working examples, and does not disclose the present invention, but discloses the addition of potassium sulfate and sodium sulfate.

The examiner disagrees. In particular, Schreyer teaches that bases such as alkali metal and alkaline earth metal hydroxides can be used (column 3, lines 22-26). In addition, Schreyer teaches that sodium hydroxide can be used. Note Example II and claim 7. In addition, even though Schreyer does in fact teach hydroxide in his Examples, applicant is reminded that all of the disclosure in a reference must be evaluated for what they fairly teach one of ordinary skill in the art. *In re Boe*, 148 USPQ (CCPA 1966). In the instant case, Schreyer clearly teaches that hydroxide can be used to treat fluorocarbon polymers.

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Applicant argues that because a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference, the cited Schreyer reference cannot be a basis for a rejection under 102(b) and that because of the lack of disclosure of all features as instantly claimed, the rejection in view of Schreyer is overcome.

In this concern, Schreyer teaches a fluorine-containing polymer comprising tetrafluoroethylene and hexafluoropropylene in the instant claimed amounts, said polymer having a melt flow rate within applicant's range and being treated with sodium hydroxide to stabilize the polymer. Hence, the examiner has reason to believe that the concentrations of alkali and alkali earth metal are within the range claimed by applicants. Clearly Schreyer teaches either expressly or inherently the subject matter defined by the invention as described in present claims 1, 8, 11 and 13.

Applicant argues that with regard to the cited primary reference of Schreyer, the Office Action states that this reference does not disclose perfluoroalkyl vinyl ether and the total content of alkali metal and alkali earth metal, wherein, applicants submit that Schreyer further fails to disclose the use of a hydroxide and/or carbonate salt as explained above.

Again, as set forth previously, Schreyer teaches that sodium hydroxide can be used. Note Example 2 and claim 7.

Applicant argues that each of Schreyer, Buckmaster, Hartwimmer, and Kaulbach fail to disclose or suggest the advantage of (1) the hydroxide or carbonate salts as instantly defined in pending claim 1, as well as (2) the alkali metal or alkali earth metal

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content range as instantly defined in pending claim 1 or claim 3. Thus, applicants submit that at least the first two rejections, Schreyer in view of Buckmaster and Hartwimmer and Schreyer in view of Kaulbach have been overcome. Applicants further argue that a proper obviousness inquiry requires consideration of three factors and that not even the first requirement, of disclosure of all claimed features, has been satisfied and thus a *prima facie* case of obviousness has not been established with respect to the cited references of Schreyer, Buckmaster, Hartwimmer and Kaulbach.

Regarding the first requirement, as set forth above and for the reasons previously stated, it is the examiner's position that Schreyer does in fact teach the advantage of hydroxide as defined in pending claim 1. As to the content of alkali metal or alkali earth metal, Schreyer teaches that the concentration of the potassium or sodium may be as low as 5 ppm. Applicant's specification discloses concentrations of 4 ppm, 6 ppm and 10 ppm as being suitable. In addition, applicant's formulas 1 and 2 depend upon the melt flow rate, whereby Schreyer teaches a melt flow rate within the claimed range. Therefore, since Schreyer teaches concentrations of alkali metal and alkali earth metal as low as 5 ppm in combination with a melt flow rate within applicant's range, it is the examiner's position that the general conditions for total content of alkali metal and alkali earth metal as required by formulas 1 and 2 are necessarily present in the composition of Schreyer and would be so recognized by persons of ordinary skill in the art. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). That Schreyer does not recognize the specific parameters of Formula 1 and 2 does not preclude the clear finding of anticipation. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d

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1342, 1349, 51 USPQ2d 1943, 1948 (Fed. Cir. 1999). Furthermore, the description of a claimed invention within the meaning of 35 U.S.C. 102 is the epitome of obviousness. Accordingly, it is the examiner's position that a *prima facie* case of obviousness has clearly been established with respect to the cited references of Schreyer, Buckmaster, Hartwimmer and Kaulbach.

Applicants argue that the requisite motivation and reasonable expectation of success are also lacking since one of ordinary skill in the art would not know how to proceed in achieving the present invention given that the references are so incomplete in their disclosure.

The examiner disagrees and the teachings in the prior art reference are relied upon for all that they would have reasonably imparted to one of ordinary skill in the art at the time the invention was made. Regarding claim 9, Buckmaster and Hartwimmer each teach terpolymer of tetrafluoroethylene, hexafluoropropylene, and perfluoroalkyl vinyl ether, wherein the terpolymers have improved mechanical properties over the copolymers. This teaching would have provided direction to the skilled artisan as to what parameters were critical, namely, improved mechanical properties, and a suggestion as to how said improvement can be accomplished, e.g. through the use of the requisite terpolymers, with the reasonable expectation of success of obtaining fluoropolymers having improved dimension stability, elongation at break and tensile strength. Regarding claims 3, 5-7, 10, 12, 14, and 16, Kaulbach teaches melt processable tetrafluoroethylene/hexafluoropropylene copolymers that optionally contain a perfluoroalkyl vinyl ether, said copolymers being free of unstable end groups and used

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to coat wire and cable conductors. Clearly the teachings of Kaulbach would have provided a suggestion to the skilled artisan that fluoropolymers of the type contemplated by applicants and as taught by Schreyer can be used in the formation of coated wires or cable with the reasonable expectation of obtaining an electric wire or cable having outstanding electrical properties.

Applicant's arguments regarding Bidstrup in view of Kaulbach are moot for reasons previously stated.

Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill M. Gray
Examiner
Art Unit 1774

jmg


RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 2/5/05